Cancer Teaching Hospital

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Abstract: Cancer Teaching Hospital is an interior project to design the inside of the hospital in order to reach balance between interior and activities of user. In this case there are 2 main users, patient and student, that each of users has different purpose in this facility. First user, patient, need to get their healthy life while the other need education to their medical experience. Therefore, it needs something to connect those 2 users to gain harmony in 1 facility. This project is one of solution for cancer disease and education for medical experience. It is not only cure by medicine but also by the environment and people who will support them in the hospital.

Key words: Hospital, Cancer hospital, Teaching hospital, Harmony of interior

1. Introduction

Most Indonesian are rarely believe with the facilities of hospital in their own country. There are about 50 percent of international patient who get medicated in Singapore, and all of them are Indonesian. While Indonesian, who get medicated, in Malaysia are about 12,000 people/year. (NHG-IBDU, 2011)

The reality is real although hospital is one of the important facilities to support life of the people in a country. Not only important but this facility is the main important because many diseases in this world can affect people’s life. There are also disease that needs special treatment because of the damage that its made. One of the diseases that need special treatment is cancer. Cancer is a disease that characterized by abnormalities of cell which give an ability to grown up uncontrolled (the cell division exceeded the normal limit). Most of cancer is causing death and it’s one of the leading causes of death in developing countries. But the fact is cancer can be treated especially when starting the treatment early. (www.yayasankankerindonesia.org, 2011)

WHO gives a prediction about the increasing of cancer patient reaching 7 times. Also cancer patient in Indonesia will increasing in 2020, therefore it needs some earlier anticipation. (dr. Ni Luh Putu Menon Partini, 2011)

If there will be an anticipation about this disease, it is require treatment and also facilities. It will require some innovation from medical expert too, to produce the best way of treatment for cancer patient. This innovator can be obtained from the earlier education of cancer disease; this education can be obtained through teaching hospital.

While in Indonesia, from 120 listed as teaching hospital, only 53 teaching hospitals have been established as the formal teaching hospital. It contains 42 general hospitals and 11 dental hospitals. (Indonesia Ministry of Health, 2011)

Therefore teaching hospital based on specialist hospital will become one of the answers of cancer disease. Through this cancer teaching hospital, the medical expert will have more focus on cancer causing the treatment and also the innovation of cancer will be achieved.
2. Process of creativity study

The purpose of designing this facility is to produce an interior hospital that helps medication of cancer patient psychologically. This research also has purpose to make cancer patient in Indonesia will gain prosperity to medicate in their own country. It also help intern to gain experiences of their medical knowledge so someday they will more understand about cancer, and hopefully can help them to find any innovation idea about cancer.

To reach those purposes, it needs problem identification in order to have a straight vision to gain the intended target. The limits are:

- How to give a good impression to all of users of teaching hospital in Indonesia.
- How to give facilities needed to optimize the function of hospital area.
- How to give a positive psychological effect to all of users.

There are some references that used to solve the problem identification. Here are the main references that used as basics in designing this facility.


This book is about standard design of general hospital. This standard design used as main reference in designing cancer teaching hospital.

b. Hospitals Integrated Design (1951) by Isadore Rosenfield.

This book explained about facilities that are containing in specialist hospital and also the zone of those facilities.


In this book explained how color influences the healing of a patient in hospital. This color theory is use as a basic reference of the color design in this facility.

3. Results of creative study

3.1 Based on analysis

Based on the first process of cancer teaching hospital, there are 3 analyses that produced, the analyses are:

a. Project analysis

There are 3 things that need to be analyzed from the title of project; cancer, teaching, and hospital.

**Cancer**

Cancer as mostly people knows is incurable disease, although in fact there are treatments for this disease. First if you concern it earlier, second there are herbal treatment that commonly known in Indonesia. Even though herbal isn’t famous enough in the world, but in Indonesia it is common sense. Therefore, for this research, this treatment will become an implementation for interior of this cancer teaching hospital.
Teaching

Sometimes teaching is identical with teacher and student. But it can’t be happened if the subject and object is about medical. Because medical needs experiences in the real condition, to know how the disease effect to patient, how the condition of the patient, and how the patient react with the condition. This research will set the ambience of the hospital into teaching ambience, not only teacher and student (in this case doctor and co-ass) but also between student and patient. Those combinations will support each other, how to make sure the co-ass team (intern) not nervous when they examine the patient, and how to make sure the patient will gain a trust from the intern. So, hopefully, this facility will become interaction between student and patient that will give each other credibility.

Hospital

Hospital is a place for people who sick yet they have to stay at unpleasant place (because of many things), contrary to hospitality. Although medical experts at the hospital have a friendly behavior towards the patient but still it is not listed in the hospital's interior ambience. Therefore, hospitality must be the basic of the interior hospital.

b. User facility analysis

- The inexperience intern yet has a lot of tasks to do.
- The intern that decreasing credibility of patients.
- Patients that worry with their own condition.
- All the people that need to be concerned about cancer.
- The image of hospital, teaching hospital especially, that unfriendly, unfaithfully, uncomfortably, and any negative images of hospital in people thought.

c. Facility analysis

Inside of the hospital divides into 4 zones, there are: low risk zone, medium risk zone, high risk zone, very high risk zone. Every zone grouped based on sterilized level. The higher level of zone the higher standard facility needed in that area. In this cancer teaching hospital, there are also division of zones, the zones are:

- Low risk zone: Teaching unit, office unit, research unit.
- Medium risk zone: Rehabilitation unit, outpatient unit, inpatient unit, service unit, supporting unit, and pharmacy unit.
- High risk zone: Radiology unit, laboratory unit, body unit, and sterilized unit (CSSD).
- Very high risk zone: Operation unit and emergency unit.
3.2 Design factor

Continue to the next step, second process of cancer teaching hospital, explaining the factors that can affect a harmony in this facility based on analysis that already done before. The factors are:

a. Psychology and color factor

In interior design, color is one of element that more perceived by user. Mostly, color often associate with psychology of user. In this facility there are 3 main users that to be concerned about their purposes of activities to reach psychology effect, there are:

- Intern: improving spirit and concentration of learning, reduce negative feelings when facing patient, and giving happiness when examine patient directly.

- Patient: stimulating for healing, increasing the eagerness of living, and increasing the ambience of familiarity with people around them.

- Doctor and also attendant: increasing productivity and spirit of working reduce negative feelings when facing intern or patient.

Based on psychology of users, it obtained color for interior this facility, such as:

- Monochrome: use as neutral color in order users will not over distract by color.

- Orange: has warm ambience, increase appetite for patient so it help the healing environment, create relax feeling, and also increase sleeping potential so the patient will have enough rest.

- Turquoise: is a mixture of blue and green so basically the psychology comes from both of those colors; give a relax for mind and body, give a peaceful feeling and also sense of calm environment.

b. Form factor

Form in interior design related with structure of space as well as furniture as the main element in interior. For the composition of space in this facility mostly use geometric square in order to get efficiency space, this make the function of hospital could be achieved maximum. As for the interior elements, such as furniture, will add some arc element to avoid monotonous, but it will still adjust with the composition of design space to gain harmonious.

c. Acoustic factor

Acoustic elements in this facility are combine with aesthetic elements. This combination is design into interior element, in this case it become partition.
This acoustic system called double glass partition. It can absorb the noise in waiting area so people will have a relax feeling. Especially this one is teaching hospital, as we know not only doctors but there will be interns and attendants too. The more users in a facility the more noise they made too.

It is not only giving acoustic system or aesthetic elements, but also this partition also giving an imaginary border. Most of people, who come to clinics and wait for the doctor, were sitting a little far from the clinics because there is no border. Perhaps no border things have a purpose to make the room looks larger. But it make the patient missed their called and messed up with the number of queue. Therefore in this case needs a transparent border.

d. Universal design factor

Universal design is a design that can accept and use by anyone, including difable (different ability people). Therefore Braille system will use in this facility to achieve this universal things. Braille system will use in every sign system including on the floor. Here is the application Braille system on the floor,
This floor pattern measuring 30 cm x 30 cm that arranged according to necessary path. For a floor pattern of line indicates a user can continue running, for a floor pattern of lines and dots indicate users are required to the way slowly and carefully, and to the last floor pattern that points pattern indicates users are required to stop.

It is not only for difable but also this sign system is using when something extremely happened, like earthquake or fired or any nature/human disaster, it could lead people to get out from the area to safety zone. Using yellow color to make it conspicuous from the other, so people will spontaneously follow this line when something happened unexpectedly.

e. Implementation of project title into interior elements

Design-ing a hospital not only thinking about function but also campaign the disease, in this case is cancer. Cancer patient needs a routine therapy, which makes the campaign cannot be the same each day. To make it easy, the campaign is using LED TV so it can change daily without much paper to dispose. Here are the installation designs in cancer teaching hospital,
Beside, this LED TV is not only show about campaign, but also to persuade people through disordered round shape (implement from cancer cell in human body). When you see the administration area has round shape too but in organized order, its persuade people that cancer can be cure if you concerned it fastly. (from disordered round shape into organized order round shape ; from cancer cell into normal cell).

4. Conclusions

This research has concept "nature heals" with theme "play with nature". This concept is about implementation of nature into interior design. The basic is simple, nature cannot be rebuilt into interior, and so it took the elements of nature and combines it with modern interior style. This is one step to make people realize how nature cannot be remade by human, just behave nice to nature, and enjoy it outside (the real nature) not enjoy it inside the building (the fake nature).

Second, this research has a result that the name/title of project should make into implementation of interior. So indirectly it became a campaign also blended with artwork for interior.
Third, any system such as security, audio, or universal design could turn into artwork. This research proved that those systems not only just a system, just another specification of equipment, but those system can be a part of design. It will make people didn’t distract with equipment because this can make them more stressful, it will make a relaxation for people because the beauty of the looks.

6. Bibliography
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